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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,818	09/23/2005	Michel Baylot	33900-183PUS	1789

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COHEN, PONTANI, LIEBERMAN & PAVANE LLP
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NEW YORK, NY 10176

EXAMINER

VENNE, DANIEL V

ART UNIT	PAPER NUMBER
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3617

MAIL DATE	DELIVERY MODE
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03/24/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,818	Applicant(s) BAYLOT ET AL.	
	Examiner DANIEL V. VENNE	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38-74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 49-74 is/are allowed.
- 6) ☒ Claim(s) 38-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. An amendment was received from applicant on 1/26/2009.
2. Claims 38, 43, 65, 67, 68 and 70-73 are amended.
3. Claims 1-37 are canceled.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 38-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claims 38-48 recite “quasi incompressible fluid” which is not clear. The term “quasi” in claim 38 means ‘like’ or resembling’ something. The term renders the claim indefinite since it is unclear whether the limitation “incompressible fluid” which follows the term “quasi” is part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 38-45, 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett (US 4183316). Bennett discloses an underwater buoyancy

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element [12], comprising a casing (which includes chamber [14] and membrane [18]) and a buoyancy fluid [16] having a density that is less than that of seawater, and that is confined in and entirely filling the casing (which includes chamber [14] and membrane [18]). Bennett does not explicitly disclose that the buoyancy fluid is a quasi incompressible fluid (which according to applicant's specification is a fluid for which its volume does not vary significantly when the depth of water and thus the pressure increases naturally in a gaseous state at ambient atmospheric temperature and pressure) and naturally in an entirely liquid state at the underwater depth to which the buoyancy element is immersed, nor does Bennett explicitly disclose the compressibility, depth limitations or the specific fluid characteristics recited. However, it is noted that applicant discloses in paragraphs [0022] and [0023] of the published application that the buoyancy fluid is a known compound commonly referred to as liquefied gas, and also discloses in paragraph [0035] of the published specification that the compounds selected for the fluid are easily available on the market. Therefore, it would have been obvious to provide a known fluid of commonly available compounds with Bennett to create the invention as claimed by applicant. The rationale would have been to utilize a fluid of predictable characteristics from common compounds of known and predictable physical and chemical properties that would to provide the expected results of providing a reliable buoyancy fluid for the underwater buoyancy element that would be naturally in a gaseous state at ambient atmospheric temperature and pressure, and naturally in an entirely liquid state at the underwater depth to which the buoyancy element is immersed; the specific compounds and properties recited for the fluid would be

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considered obvious as a matter of engineering design choice depending on the specific performance characteristics and operating parameters desired for the fluid and element.

9. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett (US 4183316), in view of Leonard et al. (US 6772705 B2). Bennett discloses all claimed features as indicated above, with the exception of an immersed structure suspended from the buoyancy element by at least one cable. Bennett shows an object [10] suspended from the buoyancy element [12] and indicates only that the object is joined to the buoyancy element, but is silent on the means of joining or suspending the object. Leonard et al. discloses use of cables [11] for suspending an object [12] from a buoyancy element [14]. Therefore, it would have been obvious to provide at least one cable to suspend the object to the buoyancy element as an alternative means to join the object to the buoyancy element to create the invention as claimed by applicant. The rationale would have been to utilize a known means in a predictable fashion to provide the expected results of reliably suspending an object from the buoyancy element.

Allowable Subject Matter

10. Claims 49-74 are allowed.

Response to Arguments

11. Applicant's arguments filed 1/26/2009 have been fully considered but they are not persuasive. Regarding applicant's argument that the above rejection which combines Bennett with applicant's admitted prior art is improper; applicant admits that the buoyancy fluid is a known compound commonly referred to as liquefied gas, and that the compounds selected for this fluid are readily available; therefore, it would have

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been obvious to one of ordinary skill as further indicated above to provide such a known fluid with Bennett. Regarding applicant's argument that Bennett fails to disclose the buoyancy fluid confined in and entirely filling the casing; the buoyancy fluid [16] of Bennett is considered confined in and entirely fills the casing (which includes chamber [14] and membrane [18]). Applicant's argument that Bennett does not disclose a quasi incompressible fluid is moot because the fluid indicated in applicant's specification as known prior art can be combined with Bennett as indicated above such that the fluid of Bennett could be replaced with the known fluid admitted by applicant as prior art to create the invention as claimed and as indicated above. In addition, although applicant's specification indicates that a quasi incompressible fluid is a fluid for which its volume does not vary significantly when the depth of water and thus the pressure increases; quasi incompressible is not limited to the phrase as defined in the specification and quasi incompressible can be considered like or resembling an incompressible fluid to one of ordinary skill in the art, and applicant has not defined any range of depth or pressure for the quasi incompressible fluid to not vary significantly in volume. In view of the above, the combination of Bennett with the known fluid admitted as prior art by applicant would be considered obvious to one of ordinary skill in the art.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel V. Venne whose telephone number is (571) 272-7947. The examiner can normally be reached between 7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on (571) 272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DVV

/Lars A Olson/

Primary Examiner, Art Unit 3617